

Abstract

We discuss the distribution of spectra of a direct sum decomposition of an arbitrary operator into normal and completely non normal parts. We utilize the fact that any given operator $T \in B(H)$ can be decomposed into a direct summand $T = T_1 \oplus T_2$ with T_1 and T_2 are the normal and completely non normal parts respectively. This canonical decomposition is preferred to other forms of decomposition such as Polar and Cartesian decompositions because these two do not transfer certain properties (for instance the spectra, numerical range, and numerical radius) from the original /decomposed operator to the constituent parts. This is presumably done since these parts are simpler to deal with.